I CLAIM:

1. An electrokinetic device fabricated from a polyol (allyl carbonate) polymer.

2. The electrokinetic device of claim 1, wherein said device is used for Capillary electrophoresis, Capillary Zone electrophoresis, Free Zone electrophoresis, Micellar Electrokinetic Capillary Chromatography, Affinity capillary electrophoresis, Capillary isoelectric focusing, Isotachophoresis, Capillary Gel Electrophoresis, Capillary Electrochromatography, Electrokinetic Chromatography, Nonaqueous Capillary Chromatography, or Dielectrophoresis.

3. The electrokinetic device of claim 1, wherein said polyol (allyl carbonate) polymer is diethylene glycol bis(allyl carbonate) or a copolymer comprising greater than about 10% diethylene glycol bis(allyl carbonate).

4. The electrokinetic device of claim 1, wherein said polymer is generated by polymerizing a prepolymer of polyol (allyl carbonate).

5. The electrokinetic device of claim 1, wherein the chemical properties of said polyol (allyl carbonate) polymer are modified by hydrolysis.

6. The electrokinetic device of claim 1, wherein the chemical properties of said polyol (allyl

carbonate) polymer are modified by attachment of a ligand.

7. A two-dimensional electrophoresis system for separating components within a sample, comprising

(a) an electrophoresis plate assembly that defines:

(i) a first electrophoresis region adapted to perform Micellar Electrokinetic Capillary Chromatography, Affinity capillary electrophoresis, Capillary isoelectric focusing, Isotachophoresis, Capillary Gel Electrophoresis, Capillary Electrochromatography, Electrokinetic Chromatography, Nonaqueous Capillary Chromatography, or Dielectrophoresis.

(ii) a second electrophoresis region, abutting the first electrophoresis region, adapted to perform Capillary electrophoresis, Capillary Zone electrophoresis, Free Zone electrophoresis, Micellar Electrokinetic Capillary Chromatography, Affinity capillary electrophoresis, Capillary isoelectric focusing, Isotachophoresis, Capillary Electrochromatography, Electrokinetic Chromatography, Nonaqueous Capillary Chromatography, or Dielectrophoresis in a second dimension, in a direction substantially perpendicular to said first dimension, containing a plurality of elongated separation microchannels

(iii) a sample loading port in fluid communication with said first region, for introducing a sample into said first electrophoresis region.

(b) electrode means for generating a first voltage potential across the first electrophoresis region, and

(c) electrode means for generating a second voltage potential across said the second electrophoresis region.

8. The system of claim 7, wherein said system is such that migration of sample components in the second dimension depend on sample properties that are different from the sample properties that determine sample migration in the first dimension.

9. The system of claim 7, wherein said two-dimensional electrophoresis system is constructed from a polyol (allyl carbonate) polymer.

10. The system of claim 9, wherein said polyol (allyl carbonate) polymer is diethylene glycol bis(allyl carbonate) or a copolymer comprising greater than about 10% diethylene glycol bis(allyl carbonate).

11. The system of claim 9, wherein said polymer is generated by polymerizing a prepolymer of polyol (allyl carbonate).

12. The system of claim 7, where said second region contains two or more microchannels.

13. The system of claim 7, where said two-dimensional electrophoresis system incorporates electrodes for the detection of said components within a sample.

14. A two-dimensional method for separating one or more components of a sample mixture by planar isoelectric focusing, said method comprising

(a) providing an electrophoresis plate assembly defining a planar sample separation cavity, bounded by opposing major first and second plate surfaces, which includes:

(i) a first electrophoresis region adapted to perform Micellar Electrokinetic Capillary Chromatography, Affinity capillary electrophoresis, Capillary isoelectric focusing, Isotachophoresis, Capillary Electrochromatography, Electrokinetic Chromatography, Nonaqueous Capillary Chromatography, or Dielectrophoresis.

(ii) a second electrophoresis region, abutting the first electrophoresis region, adapted to perform Capillary electrophoresis, Capillary Zone electrophoresis, Free Zone electrophoresis, Micellar Electrokinetic Capillary Chromatography, Affinity capillary electrophoresis, Capillary isoelectric focusing, Isotachophoresis, Capillary Gel Electrophoresis, Capillary Electrochromatography, Electrokinetic Chromatography, Nonaqueous Capillary Chromatography, or Dielectrophoresis in a second

dimension, in a direction substantially perpendicular to said first dimension, containing a plurality of elongated separation microchannels

(iii) a sample loading port in fluid communication with said first region, for introducing a sample into said first electrophoresis region.

(b) applying a sample mixture to said sample loading port

(c) applying a first voltage potential across the first region, under conditions effective to cause said sample components to migrate across the region, such that different components become separated as a result of some characteristic other than size

(d) applying a second voltage potential across the second region, such that said migrated sample components migrate into the second region, in a direction substantially perpendicular to said first dimension, and become separated on the basis of some characteristic other than the basis for separation in said first region.

15. The method of claim 14, wherein the sample components are polypeptides.

16. The method of claim 14, further comprising detecting the separated sample components following step (d).

17. The method of claim 14, further comprising collecting at least one of the separated sample components following step (d).

18. The method of claim 14, further comprising analyzing at least one of the separated sample components following step (d) by mass spectroscopy.

19. A sensor for the detection of chemical or biochemical components in liquid or gas comprising:

(a) at least a pair of electrodes in a sample microchannel

(b) at least a pair of electrodes in a reference microchannel

(c) a means for producing a electric field across the electrodes

(d) a means of comparing the electrical resistance, impedance, current, phase, conductivity, voltage, or other electrical parameter between said electrodes in a sample microchannel and electrodes in a reference microchannel.

20. A sensor of claim 19, where said electric field is a DC current.

21. A sensor of claim 19, where said electric field is a modulated DC current.

22. A sensor of claim 19, where said electric field is an AC current.

23. A sensor of claim 19, where said means of comparing is a potentiometer.

24. A sensor of claim 19, where said means of comparing is with a Wheatstone Bridge.

25. A sensor of claim 19, where said electrodes in a sample microchannel and said electrodes in a reference microchannel form two resistive elements of a Wheatstone Bridge.

26. A sensor of claim 19, where said means of comparing is through changes in sound frequency.

27. A sensor of claim 19, where said means of comparing is with a microammeter.

28. A method of detecting chemical and biochemical components consisting of

(a) orienting at least a pair of electrodes in a sample microchannel

(b) orienting at least a pair of electrodes in a reference microchannel

(c) generating an electric field across the electrodes

(d) introducing a sample into the sample microchannel

(e) comparing the electrical resistance, impedance, current, phase, conductivity, voltage, or other electrical parameter between said electrodes in a sample microchannel and said electrodes in reference microchannel.